REMARKS

Upon entry of the foregoing Amendment, claims 1-2, 4, 6-8, 10-39 and 41-43 are pending in the application. Claims 1-2, 4, 10-11, 13, 15, 17-18, 22, 24-27, 28-29, 32-33, and 35-43 have been amended. Claims 3, 5, 9, and 44-56 have been cancelled. No claims have been newly added. Applicants believe that this Amendment does not add new matter. In view of the foregoing Amendment and following Remarks, allowance of all the pending claims is requested.

EXAMINER INTERVIEW

Applicants thank Examiner Wozniak for granting Applicants' representative the courtesy of an Examiner Interview on January 16, 2008. During the Examiner interview, Applicants' representative discussed various distinctions between the claimed invention and the references relied upon in the rejections, as set forth below in further detail.

CLAIM OBJECTIONS

The Examiner has objected to claims 36-37 because of alleged informalities. Solely for purposes of expediting prosecution of this application, and without acknowledging the propriety of the alleged basis for the objection, Applicants note that claims 36-37 have been amended as indicated above.

Accordingly, because amended claims 36-37 fully address the objections that the Examiner has raised in the Office Action, Applicants request that the Examiner withdraw this objection to the claims.

NON-STATUTORY DOUBLE PATENTING REJECTION

The Examiner has provisionally rejected claims 1-2, 4, 6-8, 10-39 and 41-43 under the judicially created doctrine of non-statutory obviousness-type double patenting, as allegedly being unpatentable over claims 1-40 of copending U.S. Patent Application Serial No. 10/452,147.

Applicants will consider filing a terminal disclaimer to overcome this rejection once otherwise patentable subject matter has been determined. Furthermore, Applicant notes that the filing of a terminal disclaimer to obviate a rejection based on non-statutory double patenting does not constitute an admission of the propriety of the rejection. *See Quad Environmental Technologies Corp. v. Union Sanitary District*, 946 F.2d 870 (Fed. Cir. 1991).

REJECTION UNDER 35 U.S.C. § 103

1. CLAIMS 1-2, 4, 6, 17-18, 21-23, AND 27

The Examiner has rejected claims 1-2, 4, 6, 17-18, 21-23, and 27 under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent No. 6.615,172 to Bennett et al. ("Bennett") in view of "A Distributed Architecture for Cooperative Spoken Dialogue Agents with Coherent Dialogue State and History to Lin et al. ("Lin"). This rejection is improper for at least the reason that Bennett and Lin, either alone or in combination, fail to disclose, teach, or suggest each and every feature of the claimed invention.

More particularly, neither Bennett nor Lin, either alone or in combination, disclose, teach, or suggest at least the features of "a speech recognition engine that recognizes at least one of words or phrases in the encoded natural language speech utterance using the data received from the plurality of domain agents," or "an agent architecture that communicatively couples services of each of an agent manager, a system agent, the plurality of domain agents, and an agent library, wherein the selected domain agent uses the communicatively coupled services to create a response to the formulated question or command," as recited in independent claim 1, for example.

The Examiner has acknowledged that "Bennett does not explicitly disclose the use of . . . executable dialog agents associated with different domains." Final Action, pg. 7. The Examiner alleges, however, that "Lin . . . discloses a user interface agent that enables query forwarding to a particular dialog agent for answer retrieval," and further alleges that "each spoken dialog agent (SDA) has access to the same set of Internet-enabled services and . . . can access information services as a result of shared dialogue/state history." Final Action, pgs. 7-8. Applicants note that even if the Examiner has correctly characterized Lin, which Applicants do

not concede, Lin nonetheless fails to disclose, teach, or suggest the aforementioned features of the claimed invention.

For example, in Figure 2, Lin illustrates a spoken dialogue system partitioned into "a user interface agent, a spoken dialogue agent, and state dependent data." As illustrated in Figure 2, Lin modularizes and partitions the components of the spoken dialogue system into domain-independent procedures and domain-dependent procedures, and clearly characterizes "speech recognition" as a domain-independent procedure. For instance, Lin clearly states that "the **domain-independent** acoustic recognition module (including acoustic models and so on) . . . [is] included in the user interface agent." Lin, Section 2.2 (emphasis added). Figure 2 of Lin clearly illustrates an example of this distinction, where spoken dialogue agents are shown to include a domain-independent graph search and parsing module utilizing domain-dependent data, whereas the speech recognition module is clearly shown as being entirely independent of any given domain. Therefore, for at least these reasons, Lin fails to disclose, teach, or suggest at least the feature of "a speech recognition engine that recognizes at least one of words or phrases in the encoded natural language speech utterance **using the data received from the plurality of domain agents,**" as recited in independent claim 1, for example.

In addition, regarding the feature of "an agent architecture that communicatively couples services of each of an agent manager, a system agent, the plurality of domain agents, and an agent library," Lin describes a distinct "distributed architecture for cooperative spoken dialogue agents," which "the user interface agent can access . . . through a domain switching protocol, and carry over the dialogue state and history so as to keep the knowledge persistent and consistent across different domains." Lin, pg. 1, Section 1. However, apart from state-dependent data that each spoken dialogue agent can access, Lin indicates that "the domain knowledge and the dialogue control are handled in each SDA." Lin, pg. 3, Section 2.2. When a spoken dialog agent requires domain knowledge from a "domain agent [that] is different from the current SDA," Lin states that "the processes for domain switching . . . should be executed." Lin, pg. 3, Section 2.2.

Thus, to the extent that Lin describes spoken dialog agents sharing "coupled services to create a response" to an utterance, the shared services do not include those of each of "the

plurality of domain agents." As such, for at least these reasons, Lin also fails to disclose, teach, or suggest at least the feature of "an agent architecture that communicatively couples services of each of an agent manager, a system agent, the plurality of domain agents, and an agent library, wherein the selected domain agent uses the communicatively coupled services to create a response to the formulated question or command," as recited in independent claim 1, for example.

Accordingly, for at least the foregoing reasons, Bennett and Lin, either alone or in combination, fail to disclose, teach, or suggest each and every feature recited in independent claim 1. The rejection is therefore improper and must be withdrawn.

Dependent claims 2, 4, 6, 17-18, 21-23, and 27 depend from and add features to independent claim 1. Thus, the rejection of these claims is likewise improper and must be withdrawn for at least the same reasons.

Furthermore, in addition to the distinctions discussed above, neither Bennett nor Lin, either alone or in combination, disclose, teach, or suggest at least the feature of "an event manager that sends and receives events to components of the natural language speech processing system to coordinate interaction among the components of the natural language speech processing system," as recited in dependent claim 2, for example. The Examiner identifies the user interface agent of Lin as allegedly corresponding to this feature.

However, as Lin illustrates in Figure 3 and explains in corresponding text, the user interface agent only "serves as the client connected to different task agents," whereas the spoken dialogue agents "handle the dialogue and access to the database server so as to respond to user's requests in their respective domains." Lin, pg. 2, Section 2.2. Additionally, Lin explains that "domain switching is decided **by the facilitator**," and "[w]hen the user's utterance is judged **by the facilitator** to be of a different domain, the currently active SDA should notify the UIA to switch to that domain." Lin, pg. 3, Section 3. As such, Lin does not disclose, teach, or suggest the "event manager" recited in dependent claim 2 because none of the user interface agent, the spoken dialogue agents, or the facilitator "coordinate interaction among the components of the natural language speech processing system." Thus, the rejection of this claim is further improper and must be withdrawn for at least this reason.

2. CLAIMS 7-8, 10-16, 19-20, 24-26, 28-39, AND 41-43

The Examiner has rejected claims 7-8, 10-16, 19-20, 24-26, 28-39, and 41-43 under 35 U.S.C. § 103 as allegedly being unpatentable. In particular, the Examiner has rejected claims 7-8, 10-12, and 19 over Bennett in view of Lin, and further in view of U.S. Patent No. 6,937,977 to Gerson ("Gerson"), claims 13-16, 28-29, 31-37, and 41 over Bennett in view of Lin, and further in view of U.S. Patent No. 6,185,535 to Hedin et al. ("Hedin"), claim 20 over Bennett in view of Lin, and further in view of U.S. Patent No. 6,420,975 to DeLine et al. ("DeLine"), claims 24-26 over Bennett in view of Lin, and further in view of U.S. Patent No. 6,980,092 to Turnbull et al. ("Turnbull"), and claims 30, 38-39, and 42-43 over Bennett in view of Lin, further in view of Hedin and further in view of Gerson. These rejections are improper for at least the reason that the references relied upon, either alone or in combination, fail to disclose, teach, or suggest each and every feature of the claimed invention.

More particularly, for at least the reasons discussed above, neither Bennett nor Lin, either alone or in combination, disclose, teach, or suggest at least the features of "a speech recognition engine that recognizes at least one of words or phrases in the encoded natural language speech utterance using the data received from the plurality of domain agents," or "an agent architecture that communicatively couples services of each of an agent manager, a system agent, the plurality of domain agents, and an agent library, wherein the selected domain agent uses the communicatively coupled services to create a response to the formulated question or command," as recited in independent claim 1, for example.

Each of Gerson, Hedin, DeLine, and Turnbull fail to cure at least the foregoing deficiencies of Bennett and Lin. Accordingly, for at least the foregoing reasons, the references relied upon, either alone or in combination, fail to disclose, teach, or suggest all of the features recited in independent claim 1.

Independent claim 28 includes features similar to those set forth in independent claim 1. Dependent claims 7-8, 10-16, 19-20, 24-26, and 28-39 depend from and add features to one of independent claims 1 and 28. Thus, the rejections of these claims are improper and must be withdrawn for at least the foregoing reasons.

CONCLUSION

Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the outstanding Office Action. As such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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Respectfully submitted,

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